



James Warren Cape Cod Times

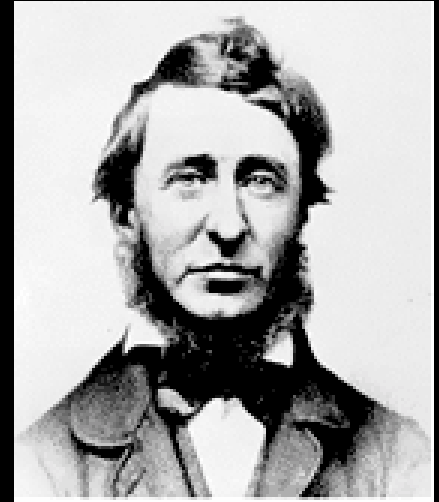
PIONEER VALLEY STRATEGIC ACTION PLAN FOR CLEAN ENERGY

Pioneer Valley Planning Commission
Franklin Regional Council of Governments

December 2006

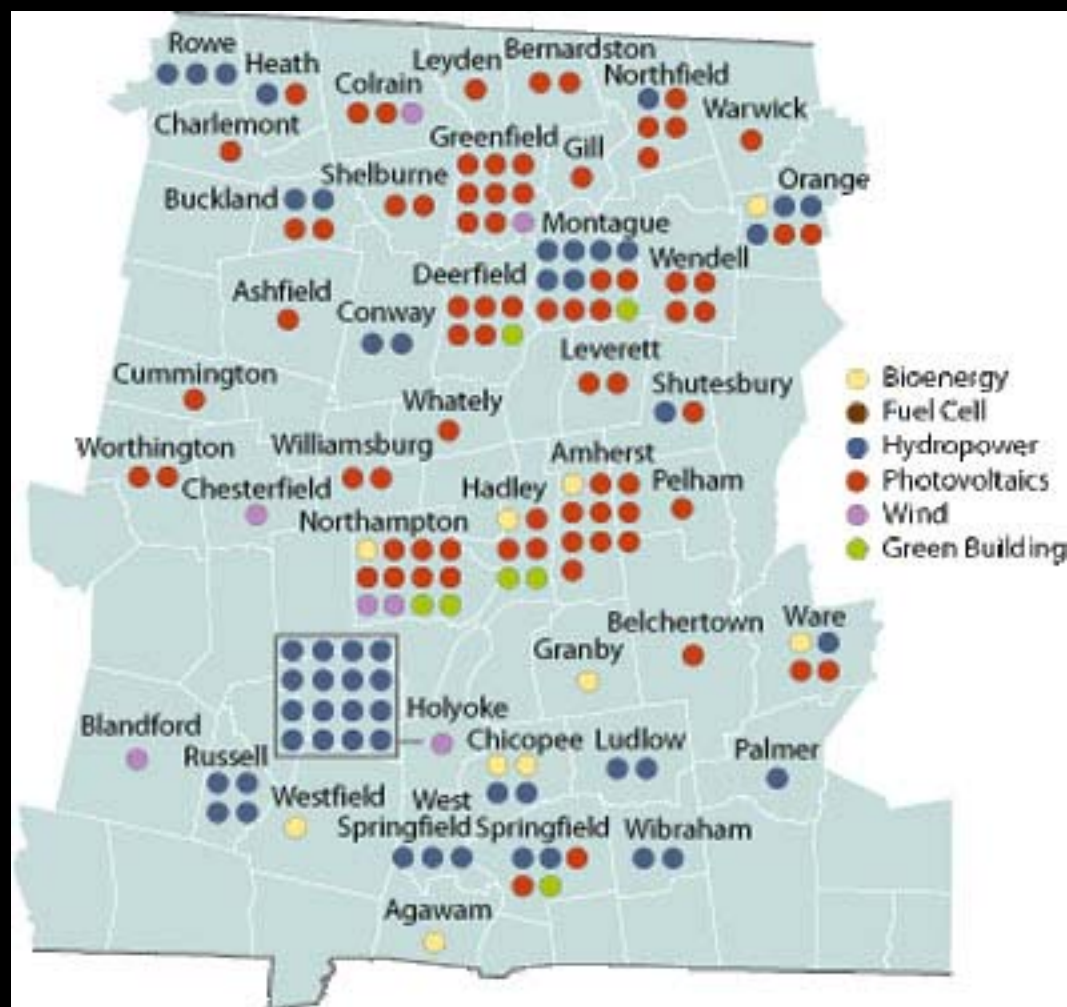
Action from principle, the perception and the performance of right, changes things and relations; it is essentially revolutionary and does not consist wholly with anything which was. It not only divides States and churches, it divides families; ay, it divides the individual, separating the diabolical in him from the divine.

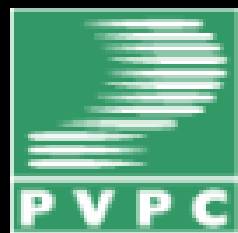
Henry David Thoreau



Pioneer Valley Clean Energy Installations

Yellow-bioenergy
Brown-fuel cell
Blue-hydro
Red-solar PV
Purple-wind
Green-green building

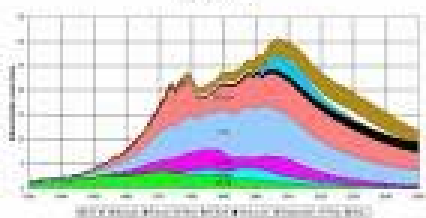




Sustainability Planning At PVPC

- Strategic Action Plan for Clean Energy
- Pro Clean Energy Policy Statement
- Transportation and Land Use-CCP I-91 communities
- Urban Forestry
- Idling Reduction
- Climate Action Planning
- Promoting Bicycling, Walking and Transit
- Smart Growth
- Voluntary Vehicle Recycling

OIL AND GAS LIQUIDS
2004 Scenario



It is time to ACT for Clean Energy!

- we have agricultural land and abundant forests that could be managed for biomass.
- we have hilltops suitable for modern wind turbines.
- we have motivated individuals and business owners using solar panels.
- we have innovative, resourceful, and creative public officials.
- we have a global energy crisis
- And there's funding!





GREEN POWER MA Goals

- Move the needle by adding 750-1,000 megawatts of clean energy to the New England grid by 2009
- Remove barriers to the development of renewable energy projects
- Facilitate development of wind projects throughout New England
- Install clustered PV to generate 1+MW

Governor-elect on Energy

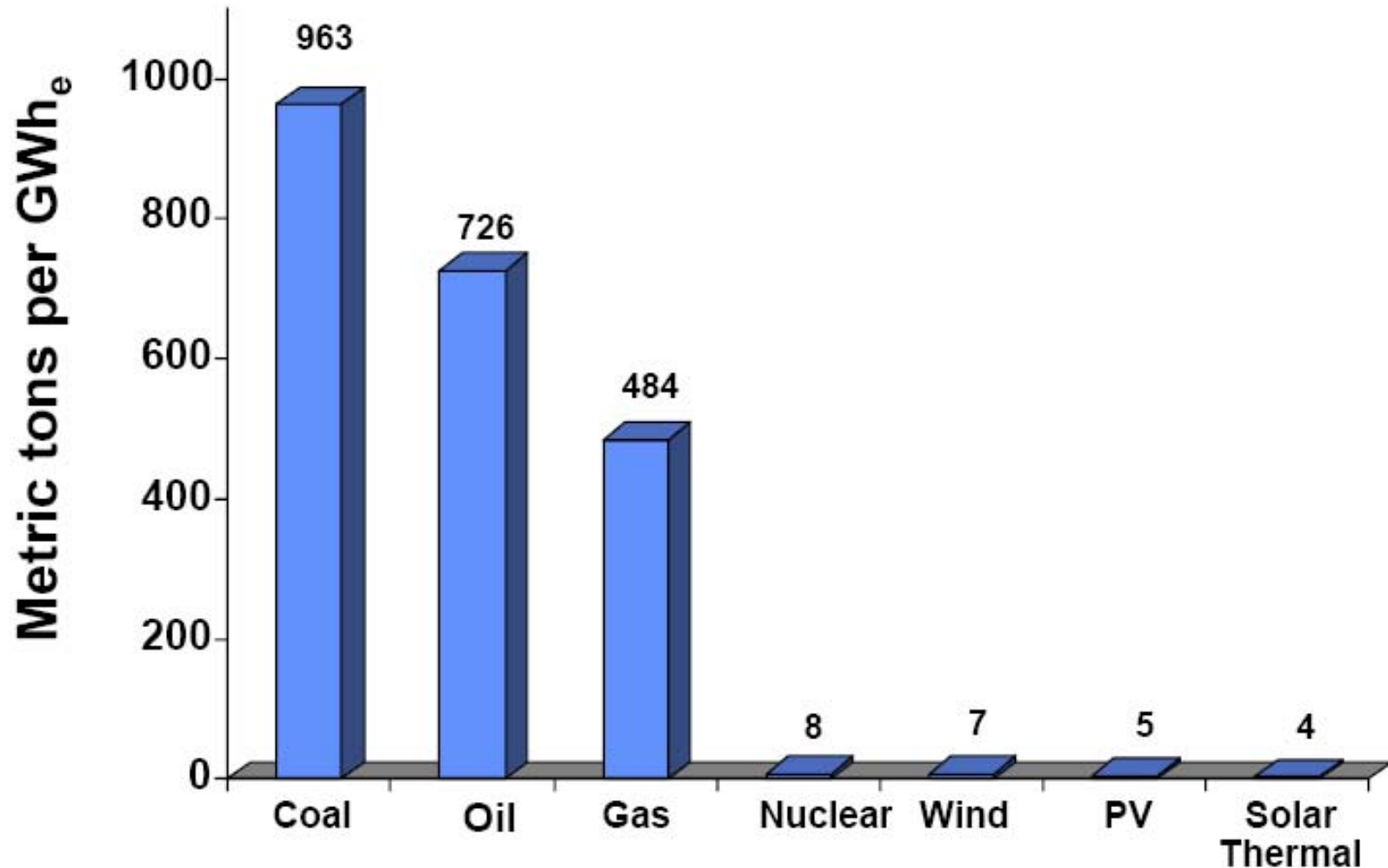


Addressing our energy needs is one of the great challenges of our time. The world needs energy that is both clean and affordable. ... The increasing international demand for alternative energy and energy-saving products and services is an opportunity for Massachusetts to seize.

Clean Energy Context-Pioneer Valley

- Motivated Residents
- Significant activity
- Resources
 - Peak oil
 - War in Iraq
 - Global Climate change

Carbon Intensity of Power Generation



1979

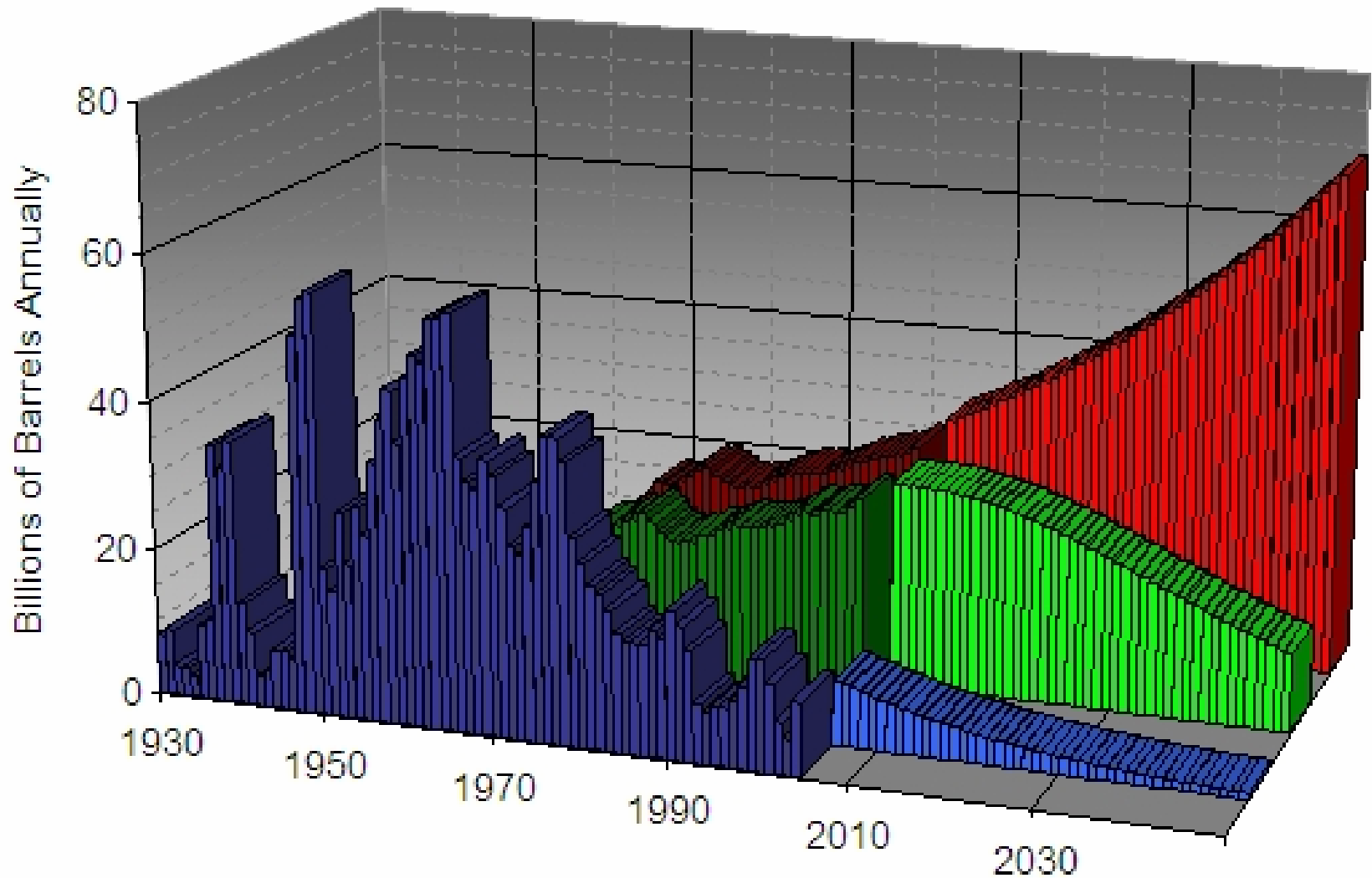


Need
Proof?

2003



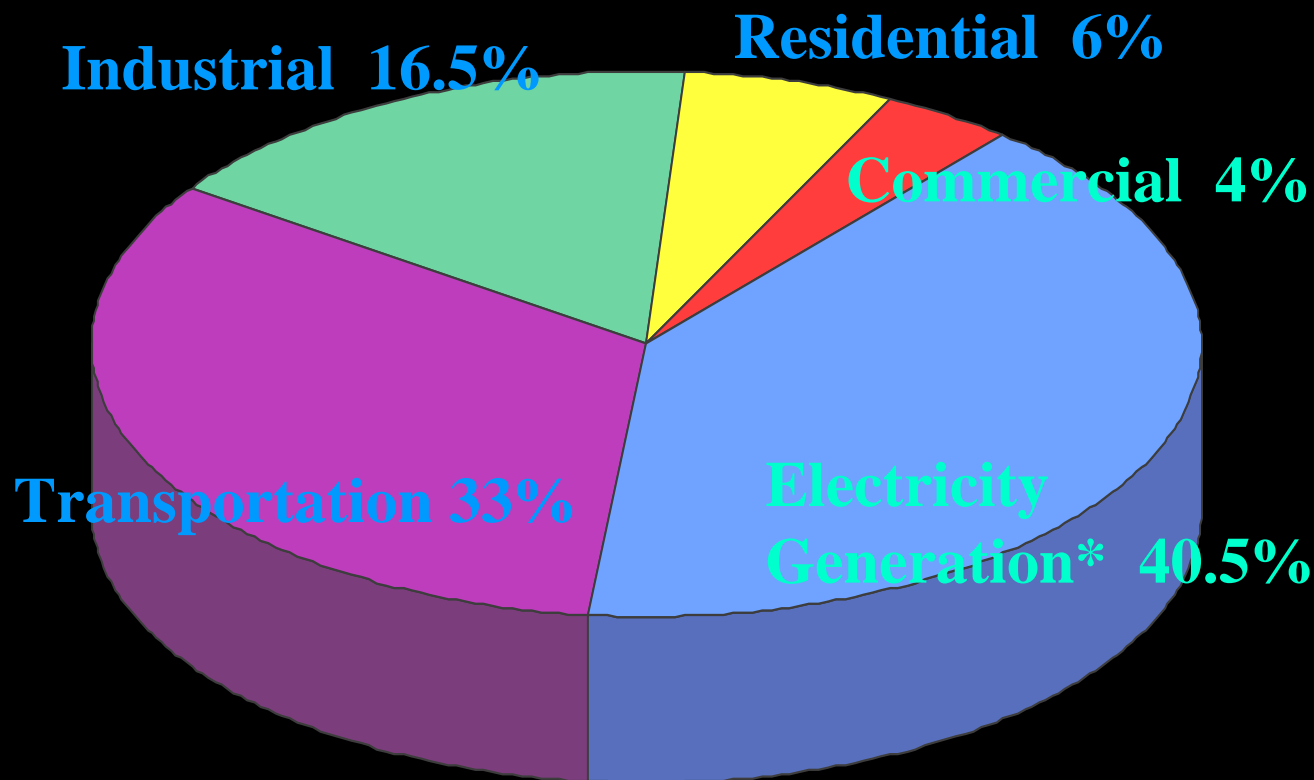
World Overview (Discovery, Production and Demand)



■ Annual Discovery ■ Projected Discovery ■ Annual Production
■ Projected Production ■ Annual Demand ■ Projected Demand

Data Sources: EIA, BP, ExxonMobil

Sources of U.S. CO₂ emissions (1999)



* Includes Cogeneration from Industrial sector

Trade Offs/Decisions

- No single solution can meet our society's future energy needs. The answer lies instead in a family of diverse energy technologies that share a common thread: **they do not deplete our natural resources or destroy our environment.**
- And in energy efficiency, demand management, conservation...

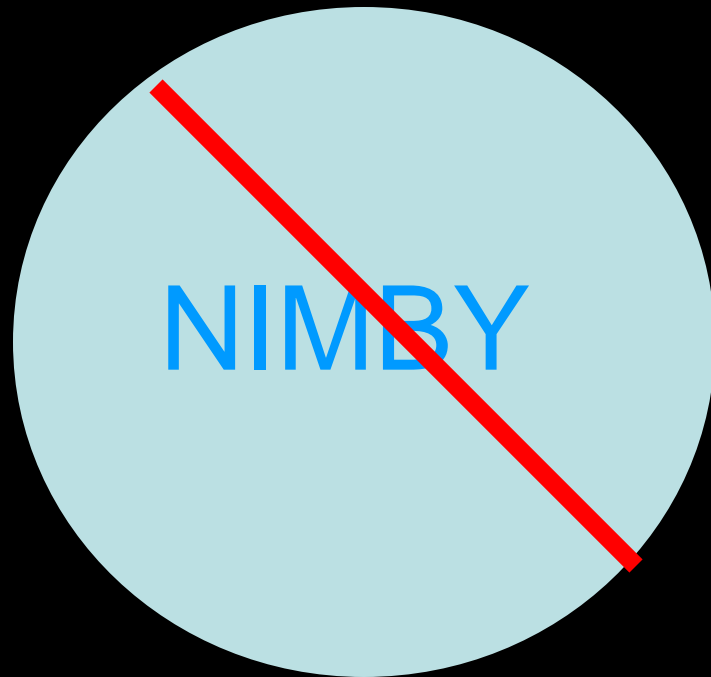
GOAL



- 75-100 MW Clean Energy generated here by 2010
- Clean Energy Jobs
- Reduce Electricity use by 200 MW

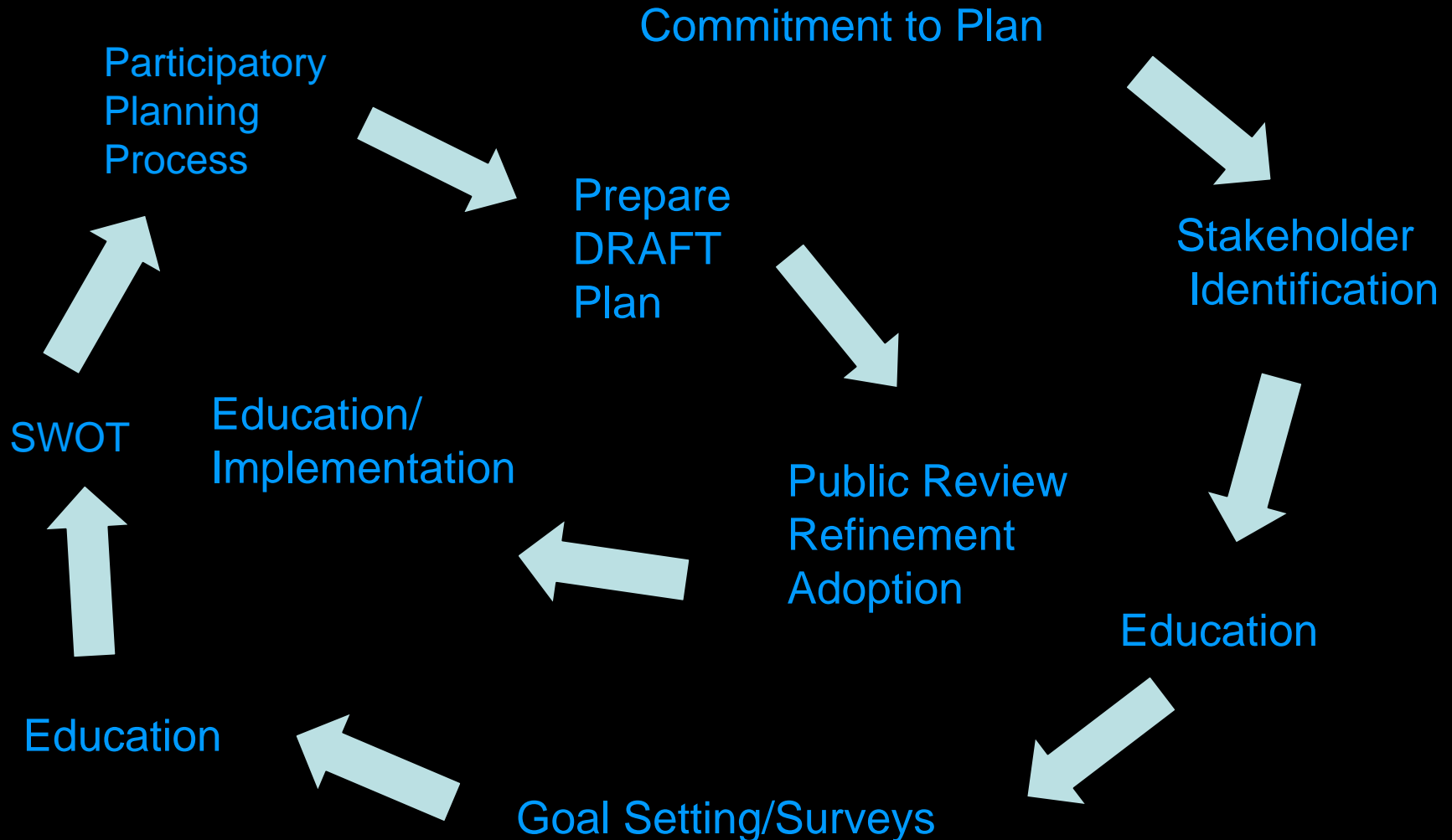
Additional Goals

- **Reduce GHG emissions**
- **Plant Trees**
- **Reduce waste and the need to expend energy processing it**
- **Green Buildings—policies, zoning**
- **Green the fleet**
- **Smart Growth**
- **Reduce Car Use**



WHERE
In
OUR
Backyard?

Strategic Planning Process



Planning Process: Democracy at work!



**Hundreds of people participated in the public
planning process**

<http://forums.e-democracy.org/pioneer-valley>

- On-line polls to build regional consensus and commitment to plan recommendations
- Special interest group forums for discussion
- Affinity groups
- Background information/resources
- In-person meetings as well

Groups

- **Builders, Planners and Architects**
- **Business Leaders**
- **Consumers**
- **Educators**
- **Environmentalists**
- **Plant Managers**
- **Farmers and Foresters**
- **Higher Education**
- **Municipal Leaders**
- **Religious Community**
- **Sustainable Economy**
- **Youth Caucus**

RE in the Pioneer Valley

- Lots of PV, and all large landfills are tapped or in process (est. 12MW)
- Some towns looking into municipal wind turbines and Hoosac wind--proposed
- Town of Russell and City of Springfield are potential sites for biomass power plants



Gill-Montague Regional School District

Advisory Committee

- Lynn Benander, CoopPower
- Dwayne Breger, MA Division Of Energy Resources
- Gordon Boyce, MA Department of Conservation and Recreation
- Kristin Burke, MA Technology Collaborative
- Don Campbell, Campbell and Associates
- Tina Clarke, Clean Water Action
- Jonathan Edwards, SmartPower
- Wayne Feiden, City of Northampton Planning and Community Development
- Seth Fischer, Northampton Energy Committee and NEPOOL
- Ann-Renee Larouche, Northampton
- Paul Lipke, Sustainable Step New England
- Peggy MacLeod, Center for Ecological Technology
- Tom Rossmassler, HAP
- Rob Rizzo, Mt. Wachusett Forest and Wood Products Institute
- Stan Swiercz, Volunteer
- Kristin Wood, Congressman Olver's Office
- Sally Wright, UMASS Renewable Energy Research Lab
- staffed by Pioneer Valley Planning Commission and Franklin Regional Council of Governments

Strategies and Actions



- Energy Production
- Energy Efficiency, Reduction, Conservation
- Land Use, Buildings, Trees
- Policy, Research, and Education
- Transportation
- Waste Management

Starting Criteria to evaluate strategies

- **Cost**
- **Time frame**
- **Availability of funding**
- **Level of existing support/opposition**
- **Already in place somewhere nearby**
- **Cost/Benefit Analysis**
- **Return on Investment**
- **Harms/Side-effects**
- **Global warming impact**
- **Location**
- **Relative ease of implementation**
- **Public relations/Visibility**
- **Sustainability**





Refined Criteria

- Protects Public and Community Health
- Strengthens Local Economy
- Reduces Greenhouse Gas Emissions
- Reduces Toxins in Our Environment
- Maximizes Use of Existing Infrastructure
- Reduces Oil Dependence
- Smallest Appropriate Scale

Still to do

- Apply criteria to strategies to identify top strategies
- Deliver draft plan to public for review
- Refine plan based on comments
- Work with 69 communities in region to endorse plan
- **IMPLEMENT!**





Lessons learned

- All regions should develop such a plan
- Siting is local!
- Education, outreach, and public dialogue is priceless and should never be ignored, skimmed on or minimized.
- Small scale, community (or as locally owned as possible) clean energy facilities are much more popular than larger scale projects.

More lessons learned

- Start with Efficiency, Reduction, and Conservation
- Very hard to plan for electricity without also addressing energy for transportation and heating
- Green Building is a NO BRAINER—all buildings built from this day forth should be “green”.
- These are very exciting times to be doing this work.



conceptual
RENDERING



University of Western Ontario

**ENGINEERING GREEN
BUILDING**

aTRM

TILLMANN • RUTH • MOCELLIN

And more lessons learned

- Municipalities face a gap in funding and technical assistance available once they have a desire/commitment to act on clean electricity or energy reduction
- We need energy circuit riders in MA—preferably engineers
- We need to include energy commissions on the Commonwealth Capital form



Where in our backyard?



- We're still not sure!
- But if it's small-scale and the result of a thorough public involvement process, it's much more likely to succeed.
- MTC's community wind collaborative and the State's emphasis on distributed generation make a lot of sense.

Little Things *DO* Matter !

If every household in the U.S. replaced *just one bulb* or fixture with an Energy Star qualified model, we could save more than 8 billion kWh—equivalent to removing 1 million cars from the road per year!

A human action becomes genuinely important when it springs from the soil of a clear-sighted awareness of the temporality and the ephemerality of everything human. It is only this awareness that can breathe any greatness into an action.



-Vaclav Havel



get
involved

SO...

- Get involved with the Pioneer Valley Clean Energy Planning Process if you live in Franklin, Hampshire, or Hampden counties
- Work to conserve energy-replace light bulbs, turn lights off, go without AC, etc
- Bike, walk and take the bus or subway when you can
- look into Clean Energy Choice
- Get involved with your local government
- VOTE!

Pioneer Valley Planning Commission

- www.pvpc.org
- Catherine Miller
- 413/781-6045
- cmiller@pvpc.org
- <http://forums.e-democracy.org/pioneer-valley>